SEQUENCE LISTING

<110> Otvos Jr., Laszlo

<120> Novel Pyrrhocoricin-Derived Peptides, and Methods of Use Thereof

<130> WST91BUSA

<140>
<141>

<150> 60/140,606
<151> 1999-06-23

<150> 60/154,135
<151> 1999-09-15

<160> 30

<170> PatentIn Ver. 2.1

<210> 1
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<221> MOD_RES
<222> (1)
<223> Asp in position 1 is attached to one or more modified amino acids or to a chemical group

<220>
<221> MOD_RES
<222> (4)
<223> Xaa can be Ser or any amino acid

<220>
<221> MOD_RES
<222> (5)
<223> Xaa can be Tyr or any amino acid

<220>
<221> MOD_RES
<222> (17)
<223> Xaa can be Asn or any amino acid

<220>
<221> MOD_RES
<222> (18)
<223> Xaa can be Arg or any amino acid and is attached to one or more modified amino acids or to a chemical group

<220>
<223> modification of Pyrrhocoricin

<400> 1
Asp Lys Gly Xaa Xaa Leu Pro Arg Pro Thr Pro Pro Arg Pro Ile Tyr
1 5 10 15

Xaa Xaa

<210> 2
<211> 20
<212> PRT
<213> Pyrrhocoricin

<220>
<221> MOD_RES
<222> (11)
<223> Thr in position 11 is modified with Gal-GalNAc

<400> 2
Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro Ile
1 5 10 15

Tyr Asn Arg Asn
20

<210> 3
<211> 10
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<213> Artificial Sequence

<220>
<223> modification of Pyrrhocoricin

<400> 3
Arg Pro Pro Thr Pro Arg Pro Leu Lys Val
1 5 10

<210> 4
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<213> Artificial Sequence

<220>
<221> MOD_RES
<222> (1)
<223> Asp in position 1 is modified by a
1-aminocyclo-hexane carboxylic acid

<220>
<221> MOD_RES
<222> (18)
<223> Arg in position 18 is modified by an amino linker
moiety

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<220>
<223> modification of Pyrrhocoricin

<400> 4
Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro Ile Tyr
 1               5                  10                  15

Asn Arg


<210> 5
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> modification of Pyrrhocoricin

<400> 5
Lys Val Asp Lys Val
 1               5


<210> 6
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> modification of Pyrrhocoricin

<400> 6
Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro Ile
 1               5                  10                  15

Tyr Asn Arg Asn
            20

<210> 7
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<213> Artificial Sequence

<220>
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<222> (1)
<223> ACETYLATION

<220>
<223> modification of Pyrrhocoricin

<400> 7
Lys Val Asp Lys Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro
 1               5                  10                  15

Pro Arg Pro Ile Tyr Asn Arg Asn
            20
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<210> 8
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<220>
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<222> (1)
<223> ACETYLATION

<220>
<223> modification of Pyrrhocoricin

<400> 8
Arg Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro
1 5 10 15

Ile Tyr Asn Arg Asn
20

<210> 9
<211> 21
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<220>
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<222> (1)
<223> ACETYLATION

<220>
<223> modification of Pyrrhocoricin

<400> 9
Lys Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro
1 5 10 15

Ile Tyr Asn Arg Asn
20

<210> 10
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<222> (1)
<223> Asp in position 1 is modified by a
1-aminocyclo-hexane carboxylic acid

<220>
<223> modification of Pyrrhocoricin

<400> 10
Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro Ile Tyr
1 5 10 15

Asn Arg Asn

<210> 11
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<220>
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<223> ACETYLATION

<220>
<221> MOD_RES
<222> (11)
<223> Thr in position 11 is modified with Gal-GalNAc

<220>
<223> modification of Pyrrhocoricin

<400> 11
Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro Ile
1 5 10 15

Tyr Asn Arg Asn
20

<210> 12
<211> 20
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<213> Artificial Sequence

<220>
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<222> (1)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (20)
<223> Arg in position 20 is modified by an imide group

<220>
<223> modification of Pyrrhocoricin

<400> 12
Lys Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro
1 5 10 15

Ile Tyr Asn Arg
20

<210> 13
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
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<222> (1)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (20)
<223> Arg in position 20 is modified by a
beta-acetyl-2,3-diamino propionic acid group

<220>
<223> modification of Pyrrhocoricin

<400> 13
Lys Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro
1 5 10 15

Ile Tyr Asn Arg
20

<210> 14
<211> 21
<212> PRT
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<220>
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<222> (1)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (21)
<223> Asn in position 21 is modified by a
2-acetamido-2-deoxyglucose group

<220>
<223> modification of Pyrrhocoricin

<400> 14
Lys Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro
1 5 10 15

Ile Tyr Asn Arg Asn
20

<210> 15
<211> 21
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<213> Artificial Sequence

<220>
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<222> (1)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (21)
<223> Asn in position 21 is modified by a
triacetyl-2-acetamido-2-deoxyglucose group

<220>
<223> modification of Pyrrhocoricin

<400> 15
Lys Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro
1 5 10 15

Ile Tyr Asn Arg Asn
20

<210> 16
<211> 20
<212> PRT
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<220>
<221> MOD_RES
<222> (1)
<223> Val in position 1 is in the D configuration

<220>
<221> MOD_RES
<222> (20)
<223> Asn in position 20 is in the D configuration

<220>
<223> modification of Pyrrhocoricin

<400> 16
Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro Ile
1 5 10 15

Tyr Asn Arg Asn
20

<210> 17
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<221> PEPTIDE
<222> (1)..(21)
<223> is a cyclic peptide

<220>
<223> modification of Pyrrhocoricin

<400> 17
Lys Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro
1 5 10 15

Ile Tyr Asn Arg Asp
20

<210> 18
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<221> PEPTIDE
<222> (1)..(29)
<223> is a cyclic peptide

<220>
<223> modification of Pyrrhocoricin

<400> 18
Arg Pro Pro Thr Pro Arg Pro Leu Lys Val Asp Lys Gly Ser Tyr Leu
1 5 10 15

Pro Arg Pro Thr Pro Pro Arg Pro Ile Tyr Asn Arg Asn
20 25

<210> 19
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<221> MOD_RES
<222> (1)
<223> Lys in position 1 has a biotin attached

<220>
<223> modification of Pyrrhocoricin

<400> 19
Lys Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro
1 5 10 15

Ile Tyr Asn Arg Asn
20

<210> 20
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<221> MOD_RES
<222> (1)
<223> Lys in position 1 is modified by a
5(6)-carboxyfluorescein group

<220>
<223> modification of Pyrrhocoricin

<400> 20
Lys Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro
1 5 10 15

Ile Tyr Asn Arg Asn
20

<210> 21
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<221> MOD_RES
<222> (1)
<223> ACETYLATION

<220>
<223> modification of Pyrrhocoricin

<400> 21
Lys Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro
1 5 10 15

Ile Tyr Asn Arg Asp
20

<210> 22
<211> 18
<212> PRT
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<220>
<221> MOD_RES
<222> (1)
<223> Asp in position 1 is modified by a
1-aminocyclo-hexane carboxylic acid group

<220>
<221> MOD_RES
<222> (18)
<223> Arg in position 18 is modified by a
beta-acetyl-2,3-diaminopropionic acid group

<220>
<223> modification of Pyrrhocoricin

<400> 22
Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro Ile Tyr
1 5 10 15

Asn Arg

<210> 23
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<221> MOD_RES
<222> (1)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (20)
<223> Arg in position 20 is modified by a
beta-acetyl-2,3-diamino propionic acid group

<220>
<223> modification of Pyrrhocoricin

<400> 23
Arg Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro
1 5 10 15

Ile Tyr Asn Arg
20

<210> 24
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<221> MOD_RES
<222> (1)
<223> Asp in position 1 is modified by a
1-aminocyclo-hexane carboxylic acid group

<220>
<221> MOD_RES
<222> (18)
<223> Arg in position 18 is modified by a
beta-acetyl-2,3-diamino propionic acid group

<220>
<223> modification of Pyrrhocoricin

<400> 24
Asp Lys Gly Ala Phe Leu Pro Arg Pro Thr Pro Pro Arg Pro Ile Tyr
1 5 10 15

Asn Arg

<210> 25
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
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<222> (19)
<223> Arg in position 19 is modified by a
beta-acetyl-2,3-diamino propionic acid group

<220>
<223> modification of Pyrrhocoricin

<400> 25
Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro Ile
1 5 10 15

Tyr Asn Arg

<210> 26
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<221> PEPTIDE
<222> (1)..(20)
<223> D configuration

<220>
<223> modification of Pyrrhocoricin

<400> 26
Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro Arg Pro Ile
1 5 10 15

Tyr Asn Arg Asn
20

<210> 27
<211> 26
<212> PRT
<213> Melittin

<220>
<221> MOD_RES
<222> (26)
<223> AMIDATION

<400> 27
Gly Ile Gly Ala Val Leu Lys Val Leu Thr Thr Gly Leu Pro Ala Leu
1 5 10 15

Ile Ser Trp Ile Lys Arg Lys Arg Gln Gln
20 25

<210> 28
<211> 15
<212> PRT
<213> T helper cell epitope

<220>
<221> MOD_RES
<222> (15)
<223> AMIDATION

<400> 28
Ala Val Tyr Thr Arg Ile Met Met Asn Gly Gly Arg Leu Lys Arg
1 5 10 15

<210> 29
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
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<222> (1)
<223> ACETYLATION

<220>
<223> modification of Pyrrhocoricin

<400> 29
Lys Val Asp Lys Val
1 5

<210> 30
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<223> modification of Pyrrhocoricin

<400> 30
Val Asp Lys Val Asp Lys Gly Ser Tyr Leu Pro Arg Pro Thr Pro Pro
1 5 10 15

Arg Pro Ile Tyr Asn Arg Asn
20